INTRODUCTION

Over one-half of the U.S. commercial fisheries catch is comprised of estuarine dependent species. The proportion of estuarine dependent species in North Carolina landings exceeds 90% annually (Street and McClees 1981). Total North Carolina commercial landings for 1988 were 192.7 million pounds of finfish and shellfish (crustaceans and mollusks), with a dockside value of $77.8 million. This value represents the money fishermen received for their catch before any further value is added by packing, freezing, processing, marketing, etc. Comparable estimates of recreational landings and their contribution to North Carolina's economy are not available; however, it has been estimated that recreational fishing in the South Atlantic (North Carolina to Florida) in 1980 resulted in retail sales in excess of $870 million, not including multiplier effects (Centaur Assoc., Inc. 1985). North Carolina's largest estuary is the Pamlico-Albemarle Sound system. Landings of edible finfish and shellfish and their dockside value in the counties surrounding this system account for approximately two-thirds of the state's edible seafood landings and value.

The North Carolina Division of Marine Fisheries (DMF) is charged with the stewardship of the state's marine and estuarine living resources. The DMF's approach is to gain sufficient knowledge of the fish and fisheries to be able to determine the reasons for trends and changes in abundance and catches, and to use that knowledge to guide and evaluate regulation of the fisheries. In management, the Division seeks to blend biological information with economic and social information to achieve optimal utilization of the resources in the long-term. To be reasonable and successful, management must consider the complexities involved in multi-year, mixed species fisheries which may span several management agencies with varying authorities and management philosophies.

The DMF has developed long-term monitoring and data-collection programs in order to provide biological information needed for management decisions. These data are compiled, entered on the Division's computerized database, and analyzed to provide management recommendations to the North Carolina Marine Fisheries Commission (MFC), which has regulatory authority over the marine and estuarine fisheries.

Data needs for fisheries management are based on why and how the MFC and DMF exercise control over the fisheries. There are a number of reasons why we manage, including: (1) to maintain and enhance stock levels (2) to restore depleted stocks levels, (3) to increase the use of under-utilized resources by the commercial/recreational industry, (4) to provide the opportunity for the commercial and recreational fishing industries to be economically viable, (5) to provide the opportunity for recreational fishermen to enjoy their sport, and (6) to insure optimal levels and variety of seafood to consumers. Knowing why we manage fisheries stocks, we can determine how we manage. Fisheries management involves: (1) establishing goals and objectives for each fishery or species complex, (2) developing a plan with appropriate measures to attain the goals and objectives, (3) implementing the plan through conversion of